In the Claims:

The claims are restated as follows:

1. (Currently Amended) A hydro-power generation system, comprising:

a housing that includes an inner wall that defines a passageway having an inlet and an outlet, wherein the cross-sectional area of the passageway is substantially uniform between the inlet and the outlet;

a rotor ~~rotatably~~concentrically positioned within the passageway~~housing~~ such that the rotor is rotated by a flow of liquid~~fluid~~ through the passageway~~housing~~;

a turbine nozzle fixedly coupled with the housing and concentrically positioned near the inlet of the passageway, wherein the turbine nozzle comprises a tip and a plurality of struts ~~operable to direct the flow of water to the rotor at increased velocity to rotate the rotor~~, the tip configured to increase the velocity of the flow of liquid by diversion of the liquid outwardly toward the inner wall, and the struts configured to direct the flow of liquid through a plurality of channels to the rotor; and

a stator fixedly positioned to surround the rotor such that rotation of the rotor induces the production of electricity.

3. (Currently Amended) The hydro-power generation system of claim 1, wherein the turbine nozzle is operable to increase the velocity of the liquid~~fluid~~ and direct the flow of liquid~~fluid~~ to achieve a predetermined angle of incidence of the liquid~~fluid~~ upon the rotor.

4. (Original) The hydro-power generation system of claim 1, wherein the rotor comprises a shaft and a turbine rotor.

5. (Original) The hydro-power generation system of claim 4, wherein the turbine rotor includes a helical ridge.

6. (Original) The hydro-power generation system of claim 4, wherein the turbine rotor includes a plurality of vanes.

7. (Original) The hydro-power generation system of claim 1, wherein the stator is fixedly positioned to surround the housing adjacent the rotor.

8. (Currently Amended) The hydro-power generation system of claim 1, wherein the stator is fixedly positioned within the passagewayhousing to surround the rotor.

9. (Original) The hydro-power generation system of claim 1, wherein the electricity is alternating current.

10. (Original) The hydro-power generation system of claim 9, wherein the rotor comprises a permanent magnet.

11. (Original) The hydro-power generation system of claim 9, wherein the alternating current is rectified to provide direct current.

12. (Original) The hydro-power generation system of claim 1, wherein the electricity is direct current.

13. (Original) The hydro-power generation system of claim 12, wherein the stator comprises a permanent magnet.

14. (Currently Amended) The hydro-power generation system of claim 1, further comprising a plurality of taps representative of coils included in at least one of the stator and the rotor and an ultraviolet light source energized with the electricity produced, wherein the taps are dynamically operable to provide different voltage levels of electricity to initially energize and continue to energize the ultraviolet light source.

15. (Currently Amended) The hydro-power generation system of claim 1, further comprising an ultraviolet light source and a plurality of coils included in at least one of the stator and the rotor, wherein the ultraviolet light source is energized with the electricity produced, and the coils are dynamically switchable from a parallel configuration to a series configuration to

provide a first voltage for initial energization and a second voltage for continued energization of the ultraviolet light source.

16. (Previously Amended) The hydro-power generation system of claim 1, wherein the hydro-power generation system is operable without flux concentrators to accelerate to a first RPM to initially energize an ultraviolet light source with a first voltage, wherein continued energization of the ultraviolet light source is operable to slow rotation of the hydro-power generation system to a second RPM and produce a second voltage.

17. (Currently Amended) The hydro-power generation system of claim 1, wherein the rotation of the rotor is operable to provide flow-based measurements of the liquid~~fluid~~.

18. (Currently Amended) The hydro-power generation system of claim 1, wherein the inlet is supplied liquid~~fluid~~ from a ~~liquid~~faucet mounted water treatment system.

29. (Currently Amended) A method of supplying electricity using a flow of liquid~~fluid~~, the method comprising:

providing a housing that includes a passageway having an inlet and an outlet, wherein the passageway has a substantially uniform cross sectional area between the inlet and the outlet;

supplying the flow of liquid~~fluid~~ to the inlet of the passageway~~housing~~, wherein the liquid~~fluid~~ flows through the passageway~~housing~~ to the outlet;

rotating a rotor that is positioned in the passageway~~housing~~ such that the rotor is surrounded by a stator, wherein the rotor rotates as a result of the liquid~~fluid~~ flowing through the passageway~~housing~~;

directing the flow of liquid outward towards an inner wall of the passageway with a tip of a turbine nozzle to increase the velocity of the flow of liquid;

directing the flow of liquid to the rotor through a plurality of channels formed with a plurality of struts included with the turbine nozzle to further increase the velocity of the flow of liquid; and

~~channeling the fluid flowing through the housing to the rotor with a turbine nozzle to increase the velocity of the flowing fluid, wherein the turbine nozzle comprises a tip and a plurality of struts; and~~

generating electricity with the rotor and the stator, wherein rotation of the rotor induces the generation of electricity.

32. (Original) The method of claim 29, wherein the electricity generated is alternating current.

33. (Original) The method of claim 32, further comprising the act of rectifying the alternating current to provide direct current.

34. (Original) The method of claim 29, wherein the electricity generated is direct current.

35. (Original) The method of claim 29, further comprising the act of charging an energy storage device.

36. (Currently Amended) The method of claim 29, further comprising the act of channeling the liquid~~fluid~~ to the outlet with a plurality of exit guide vanes.

37. (Currently Amended) The method of claim 29, further comprising the act of circulating the liquid~~fluid~~ to a bearing to cool and lubricate the bearing.

38. (Currently Amended) The method of claim 29, further comprising the act of dynamically adjusting the voltage and current levels of the electricity with a plurality of coils included in at least one of the stator and the rotor in response to initial energization and continued energization of an ultraviolet light source by the electricity generated.

39. (Original) The method of claim 38, further comprising the act of switching the coils between a parallel configuration and a series configuration.

40. (Original) The method of claim 38, further comprising the act of electrically connecting the coils with a plurality of taps to provide a plurality of voltage levels.

41. (Previously Amended) The method of claim 29, further comprising the acts of accelerating the hydro-power generation system in the absence of flux concentrators to a first RPM to initially energize an ultraviolet light source; and slowing the hydro-power generation system to a second RPM and a second voltage by continued energization of the ultraviolet light source.

53. (Currently Amended) The hydro-power generation system of claim 1, wherein the stator comprises a plurality of exit guide vanes and a fin, the exit guide vanes and the fin cooperatively operable to channel the flow of liquid~~fluid~~ to the outlet, wherein the alignment of the exit guide vanes with the channels form a substantially straight path for the flow of liquid through the passageway.

54. (Previously Added) The hydro-power generation system of claim 1, wherein the housing comprises a first section and a second section, the first section detachably coupled with the second section to facilitate assembly and maintenance.

55. (Previously Added) The hydro-power generation system of claim 54, wherein the rotor and stator are disposed in the second section and the turbine nozzle is disposed in the first section.

56. (Currently Amended) The hydro-power generation system of claim 1, wherein the liquid~~fluid~~ is drinking water.

58. (Previously Added) The method of claim 29, comprising the initial act of adjusting the struts to control the velocity of the flow of liquid.

59. (Previously Added) The method of claim 29, comprising the initial act of

adjusting the struts in order to adjust at least one of the angle of incidence of the liquid on the rotor, efficiency, turbulence and pressure drop.

60. (New) A hydro-power generation system comprising:

a housing having an inner wall that defines a passageway, the passageway having an inlet and an outlet and configured to accommodate a flow of liquid through the housing;

a turbine nozzle positioned concentrically in the passageway, wherein the turbine nozzle includes a tip positioned near the inlet that is configured to divert the flow of liquid outwardly toward the inner wall and a plurality of struts operable in conjunction with the inner wall to form a plurality of inlet channels to channel the diverted flow of liquid;

a rotor comprising a turbine rotor coupled with a generator rotor by a shaft, the rotor positioned concentrically in the passageway downstream of the turbine nozzle so that the flow of liquid through the inlet channels is directed to the turbine rotor; and

a generator stator concentrically positioned to surround the generator rotor, the generator stator coupled with the inner wall by a plurality of exit guide vanes that are operable in conjunction with the inner wall to form a plurality of exit channels, wherein the inlet channels are aligned with the exit channels to form a substantially straight flow path for the flow of liquid through the passageway.

61. (New) The hydro-power generation system of claim 60, further comprising a bearing rotatably coupled with the shaft and fixedly coupled with the generator stator, wherein the turbine rotor comprises a turbine blade rotatably positioned adjacent to the inlet channels and the depth of the turbine blade is greater than the depth of the inlet channels to provide circulation of a portion of the flow of liquid to cool and lubricate the bearing.

62. (New) The hydro-power generation system of claim 60, wherein the housing comprises a first section detachably coupled with a second section, the turbine nozzle disposed in the first section, and the rotor and the generator stator disposed in the second section.

63. (New) The hydro-power generation system of claim 60, wherein the rotor is configured to rotate at about 15,000 revolutions-per-minute.

64. (New) The hydro-power generation system of claim 60, wherein the generator rotor is a permanent magnet and the generator stator comprises a plurality of coils.

65. (New) The hydro-power generation system of claim 60, wherein the passageway comprises a cylinder having a substantially uniform cross sectional area between the inlet and the outlet.

66. (New) The hydro-power generation system of claim 60, wherein the tip comprises a rounded protuberance extending from near the inlet towards the outlet.

67. (New) The hydro-power generation system of claim 66, wherein the diameter of the tip increases toward the outlet.

68. (New) The hydro-power generation system of claim 60, wherein the housing is configured to be mounted in a faucet mounted water treatment system.

69. (New) The hydro-power generation system of claim 60, wherein the turbine nozzle, the rotor and the generator stator are immersible in and surrounded by the flow of liquid through the passageway.

70. (New) The hydro-power generation system of claim 60, further comprising an ultraviolet light source coupled with the generator stator, wherein the generator stator is configured to provide capability to start the ultraviolet light source so that, upon initial rotation of the generator rotor by the flow of liquid, the generator stator generates a start voltage capable of initial energization of the ultraviolet light source.

71. (New) The hydro-power generation system of claim 70, wherein the generator stator is configured to generate a running voltage to maintain energization of the ultraviolet light

source when rotation of the generator rotor slows due to increased rotational loading of the generator rotor as a result of the initial energization of the ultraviolet light source.

72. (New) A hydro-power generation system, comprising:

a housing that includes an inner wall that defines a passageway having an inlet and an outlet, wherein the cross-sectional area of the passageway is substantially uniform between the inlet and the outlet;

a rotor concentrically positioned within the passageway such that the rotor is rotated by a flow of liquid through the passageway;

a turbine nozzle fixedly coupled with the housing and concentrically positioned in the inlet of the passageway, wherein the turbine nozzle comprises a tip and a plurality of struts, the tip configured to increase the velocity of the flow of liquid by diversion of the liquid outwardly toward the inner wall, and the struts configured to direct the flow of liquid through a plurality of channels to the rotor;

a stator fixedly positioned to surround the rotor such that rotation of the rotor induces the production of electricity, wherein at least one of the stator and the rotor comprises a plurality of coils; and

an ultraviolet light source coupled with one of the stator and the rotor, wherein the coils are dynamically switchable to provide a first voltage for initial energization and a second voltage for continued energization of the ultraviolet light source.

73. (New) The hydro-power generation system of claim 72, wherein the coils are dynamically switchable from a parallel configuration to a series configuration.

74. (New) The hydro-power generation system of claim 72, wherein the coils comprise a plurality of taps, and the coils are dynamically switchable by dynamic selection of different taps.

75. (New) The hydro-power generation system of claim 72, wherein the housing is configured to be disposed within and form part of a water treatment system.

76. (New) The hydro-power generation system of claim 75, wherein the water treatment system is a faucet mounted water treatment system.

77. (New) The hydro-power generation system of claim 75, wherein the water treatment system is an undercounter water treatment system.

78. (New) The hydro-power generation system of claim 72, further comprising a microprocessor, the microprocessor configured to dynamically switch the coils in response to the current and voltage output of one of the stator and the rotor.